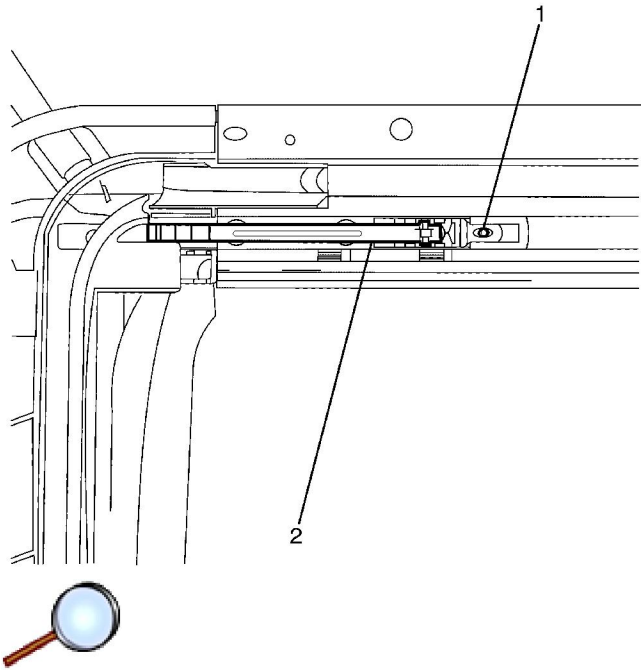
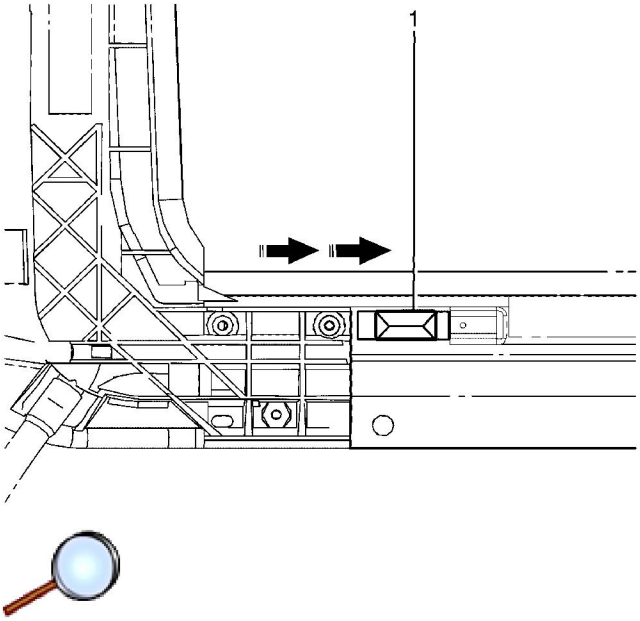
Sunroof Air Deflector Replacement

Removal Procedure

1. Cycle the sunroof window to the rear.



2. Remove the air deflector to sunroof module retaining bolt (1). Repeat for the opposite side.
3. Disconnect deflector spring (2) from the sunroof module. Repeat for opposite side.

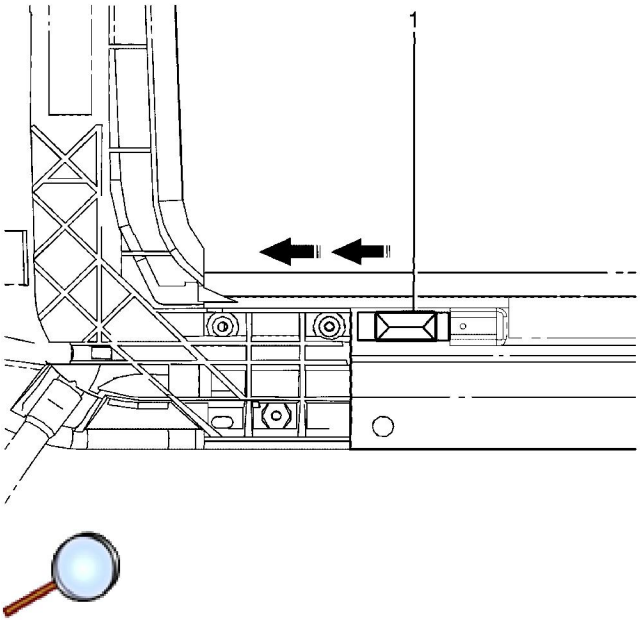


4. With the aid of an assistant, slide the air deflector towards the rear of the vehicle to disengage the retaining clips (1) of the sunroof module.
5. Remove the air deflector from the vehicle.

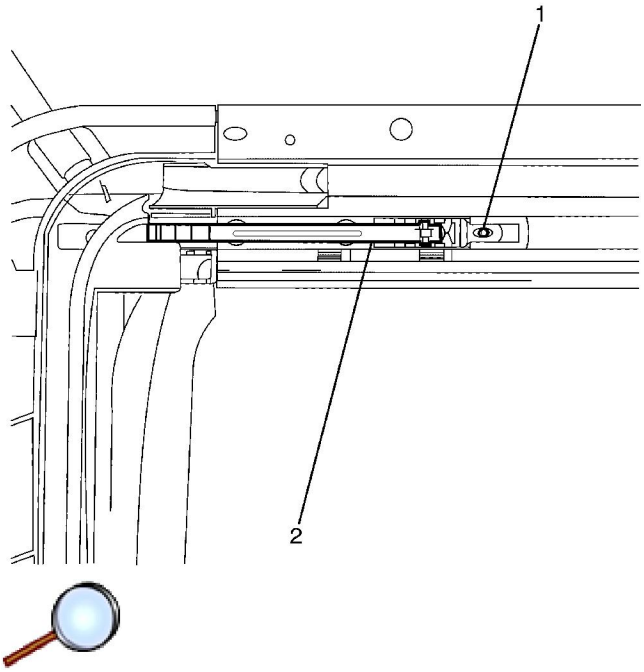
© 2010 General Motors Corporation. All rights reserved.

Installation Procedure

1. Install the air deflector to the sunroof module.



2. With the aid of an assistant, slide the air deflector towards the front of the vehicle to engage the retaining clips (1) of the sunroof module.
3. While holding the right side down push the left front side of the air deflector towards the right side.
4. Pull up on the left side until the lower tab (1) clears the roof opening.



5. Connect the deflector spring (2) to the sunroof module. Repeat for opposite side.

   Caution: Refer to Fastener Caution in the Preface section.

6. Install the air deflector to sunroof module retaining bolt (1) and tighten to **1 N·m (9 lb in)**.

Repeat for opposite side.

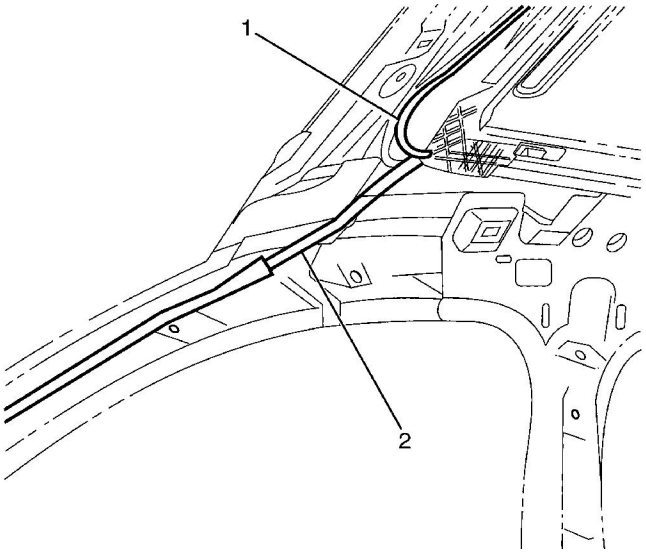
7. Push the left front side of the air deflector inwards and down so the tab clears the roof opening.
8. Close the sunroof window.

Sunroof Module Assembly Replacement

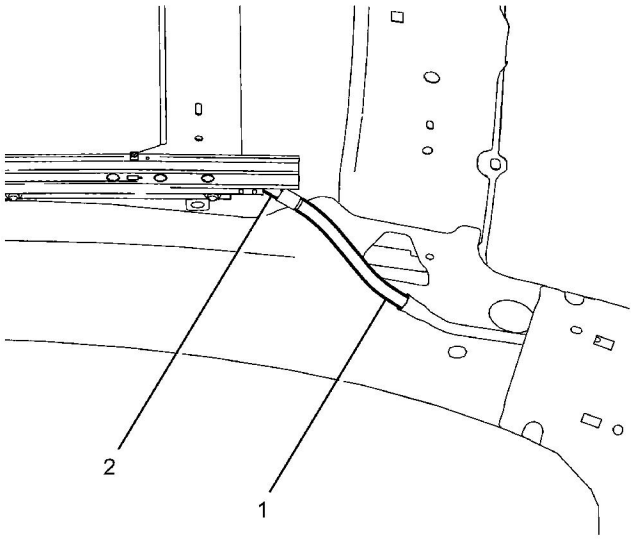
Removal Procedure

Note: A new sunroof module will not have the sunroof window or the sunshade as components of the new service part.

1. The old sunroof window and sunshade will need to be installed to the new sunroof module.
2. Remove the headliner. Refer to Headlining Trim Panel Replacement.

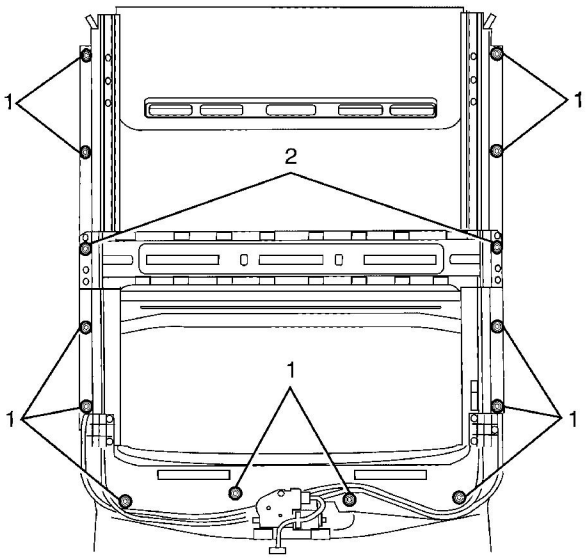


3. Disconnect the front drain hoses from the sunroof front drain spouts (1).



4. Disconnect the rear upper drain hoses (1) from the sunroof rear drain spouts (2).

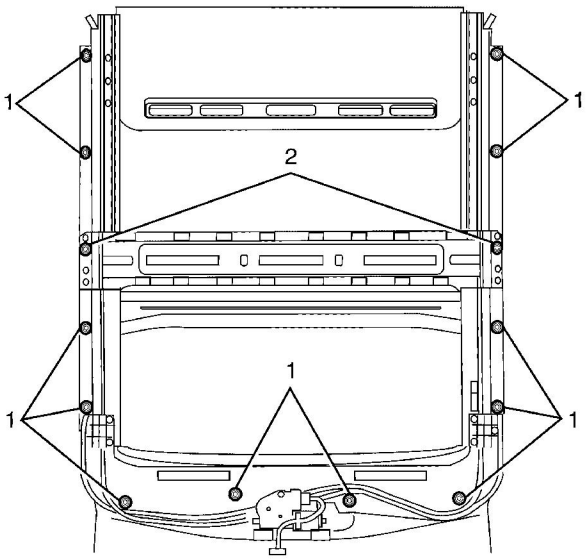
© 2010 General Motors Corporation. All rights reserved.



5. Remove the sunroof module to roof ring retaining bolts (1).
6. Remove the two centre, side to side, bolts last in order to help support the sunroof module to the roof ring.
7. With the aid of an assistant, remove the last two sunroof module to roof ring retaining bolts.
8. With the aid of an assistant, lower and remove the sunroof module out the front passenger side door.
9. Remove the sunroof window. Refer to Sunroof Window Replacement.
10. Remove the sunshade panel. Refer to Sunroof Sunshade Replacement.
11. Remove the air deflector. Refer to Sunroof Air Deflector Replacement.

Installation Procedure

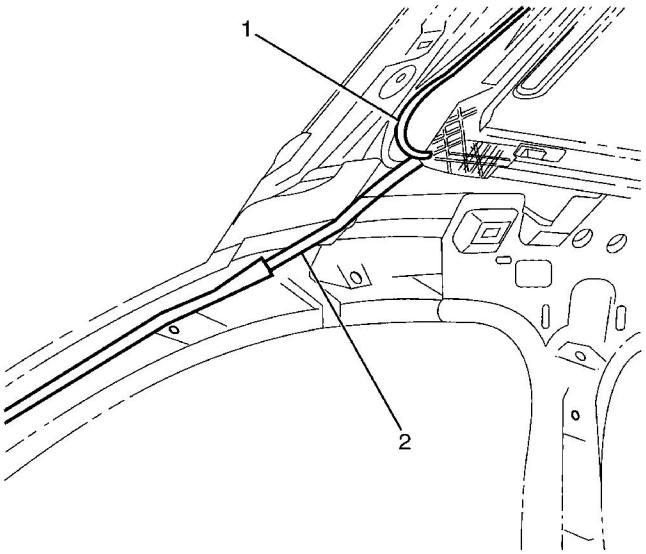
1. Install the air deflector. Refer to Sunroof Air Deflector Replacement.
2. Install the sunshade panel. Refer to Sunroof Sunshade Replacement.
3. Install the sunroof window and loosely install the retaining screws. Refer to Sunroof Window Replacement.



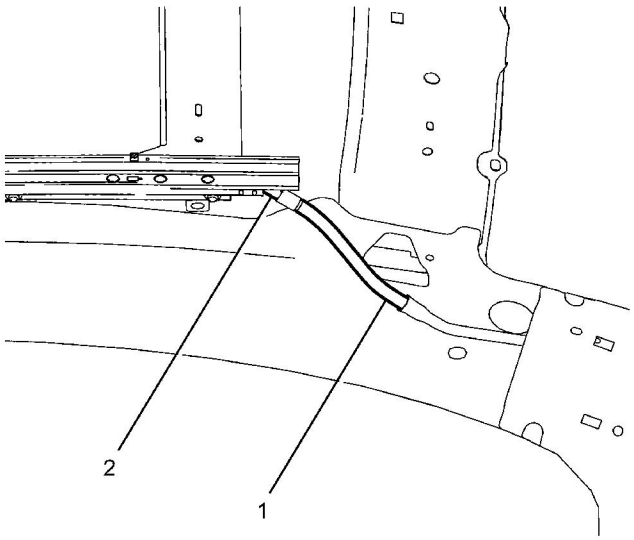
4. With the aid of an assistant, position the new sunroof module into the alignment pins (2) located on the roof ring.
5. Hand start the two centre, side to side, sunroof module to roof ring retaining bolts (1) in order to hold the sunroof module in place.
6. Finger tighten the two centre retaining bolts.

Caution: Refer to Fastener Caution in the Preface section.

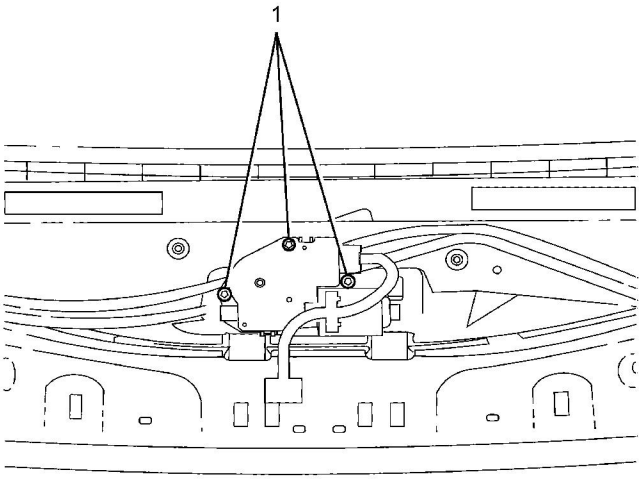
7. Install the remaining sunroof module to roof ring retaining bolts (1) and tighten to **2 N·m (18 lb in)**.



8. Connect the front drain hoses to the drain spouts (1).



9. Connect the rear drain hoses to the drain spouts (1).

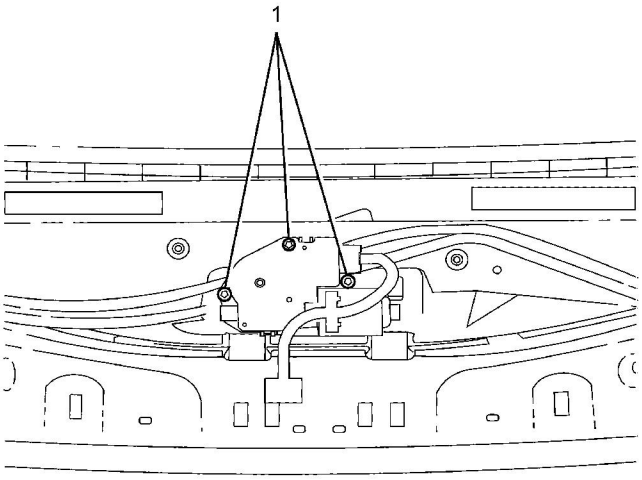


10. Install sunroof motor/actuator to the module.
11. Install the motor/actuator to sunroof module retaining screws (1) and tighten to **2 N·m (18 lb in)**.
12. Connect the electrical connector to the sunroof motor/actuator.
13. Secure the harness with suitable straps.
14. Adjust the sunroof window. Refer to Sunroof Window Height and Opening Fit Adjustment.
15. If re-programming is required. Refer to Control Module References.
16. Verify the proper operation of the sunroof before securing the headliner.
17. Initilization /Teach the sunroof motor. Refer to Sunroof Motor/Actuator Synchronization.
18. Install the headliner, with an assistant. Refer to Headlining Trim Panel Replacement.

Sunroof Motor / Actuator Replacement

Removal Procedure

1. Lower the headliner to access the sunroof actuator. Refer to Headlining Trim Panel ReplacementHeadliner Replacement in Interior Trim.



Note: If the sunroof window is partially closed, remove the actuator first, before moving the sunroof window forward.

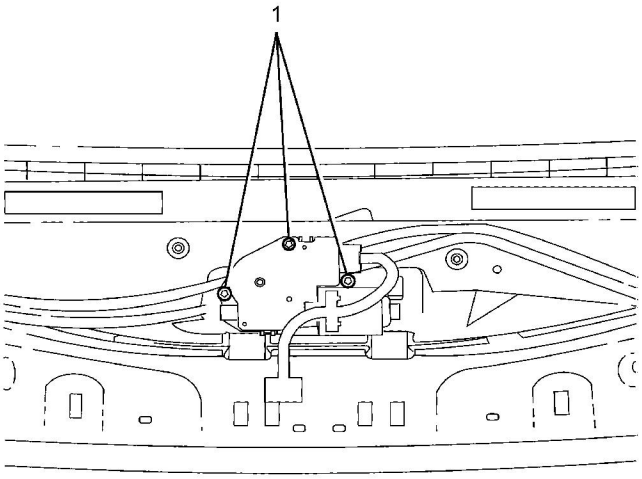
2. Remove the sunroof actuator to sunroof module retaining bolts (1).
3. Disconnect the sunroof actuator wiring connector.
4. Remove the sunroof actuator from the sunroof module.

Installation Procedure

1. Manually move the sunroof window to the fully closed position.
2. Install the sunroof actuator to the sunroof module.

Caution: Refer to Fastener Caution in the Preface section.

© 2010 General Motors Corporation. All rights reserved.



3. Install the sunroof actuator to sunroof module retaining screws (1) and tighten to **2 N·m (18 lb in)**.
4. Connect the sunroof actuator wiring connector to the sunroof actuator.
5. Initilization /Teach the sunroof motor. Refer to Sunroof Motor/Actuator Synchronization.
6. Verify the sunroof operation.
7. Install the headliner. Refer to Headlining Trim Panel ReplacementHeadliner Replacement in Interior Trim.

Sunroof Motor/Actuator Synchronization

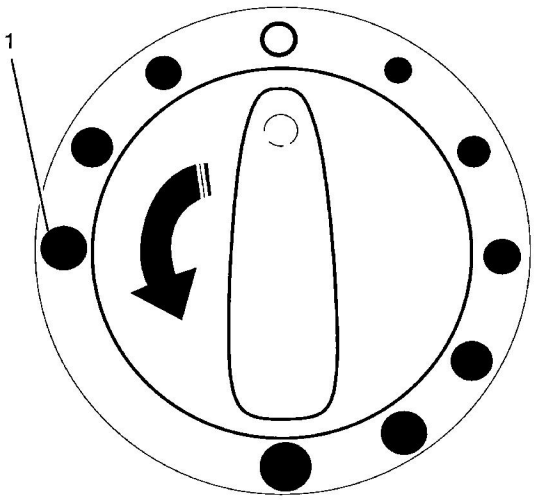
Important: The sunroof actuator is timed at the factory. If there is battery voltage applied to a new sunroof actuator, the pre-timed settings within the sunroof actuator are lost and cannot be reset or used to accommodate proper installation.

There should be no battery voltage applied to a new sunroof actuator until the following conditions are satisfied:

The power sunroof actuator is installed to the sunroof control module.

Initialization Procedure

1. Install the power sunroof actuator. Refer to Sunroof Motor/Actuator Replacement.
2. Ensure that all electrical harness connectors are connected.
3. Turn the ignition to ON.



4. Turn the sunroof dial to the full vent position (1).
5. Press and hold the sunroof dial switch in for a minimum of five seconds to activate the sunroof initialization process. The sunroof will move to the hard stop position and will stop in the soft stop position.
6. Release the switch.

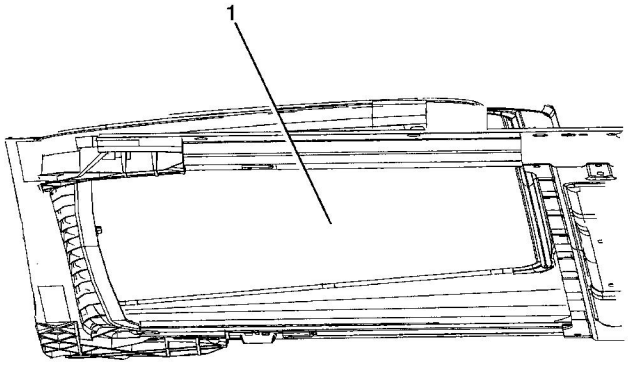
Teach Mode Procedure

1. Press and hold the sunroof switch in within 2 seconds of the initialization procedure.
2. Hold the switch in until the sunroof moves to the full open position then moves to the closed position and stops.
3. Release the switch.
4. Verify the operation of the sunroof in all positions.

© 2010 General Motors Corporation. All rights reserved.

Sunroof Panel Side Opening Closeout Cover Replacement

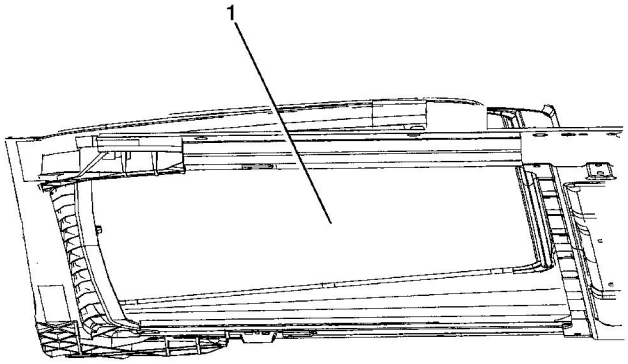
Removal Procedure



1. Open the sunshade to the full rearward position.
2. Open the sunroof window to the vent position.
3. Detach both sides of the sunroof panel side opening covers (2) from the sunroof window (1).
4. Open the sunroof to the full open position.
5. Using a suitable tool, press the locking tab (4) outward, from inside the roof opening, in order to detach the sunroof panel side opening cover from the sunroof track channel (3).
6. With the lock tab (4) depressed, lift the front edge of the sunroof panel side opening cover from the track, working towards the rear of the sunroof opening.
7. Repeat the steps for the entire length of the sunroof panel side opening cover (6).
8. Remove the sunroof panel side opening cover from the sunroof module track assembly.

Installation Procedure

© 2010 General Motors Corporation. All rights reserved.

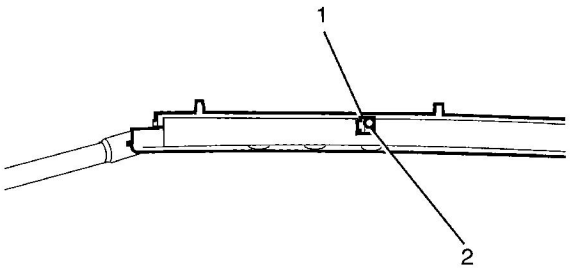


1. Place in position, the new sunroof panel side opening cover to the sunroof module track assembly.
2. Hold the lower part of the sunroof panel side opening cover firmly and press the locking tab (2) into the track assembly.
3. Make sure the entire length of the sunroof panel side opening cover is secure to the sunroof assembly track.
4. Close the sunroof window (1).
5. Open the sunroof window to the vent position.
6. Secure the sunroof panel side opening cover to the three clips (1) located on the inside edge of the sunroof window.
7. Close the sunroof window.
8. Cycle the sunroof window to the vent position and full open positions in order to make sure the sunroof panel side opening covers are secure to the attachment clips.
9. Close the sunroof window.
10. Close the sunshade.

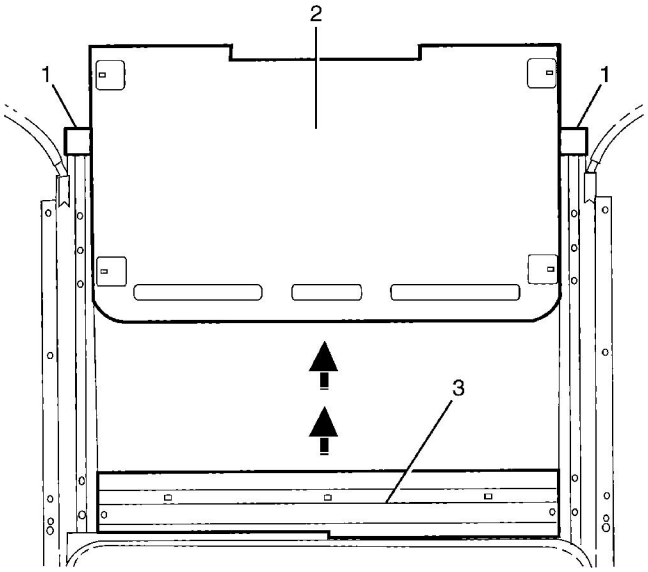
Sunroof Sunshade Replacement

Removal Procedure

1. Cycle the sunroof window to the vent position in order to ease in the removal of the sunshade panel.
2. Remove the headliner. Refer to Headlining Trim Panel Replacement.
3. Remove the sunroof module. Refer to Sunroof Module Assembly Replacement.



4. Remove the sunshade stop rubber to sunroof module retaining screw (2). Repeat for the opposite side.
5. Remove the sunshade stop rubber (1) from the sunroof module by sliding the sunshade stop rubber to the rear of the sunroof module. Repeat for the opposite side.



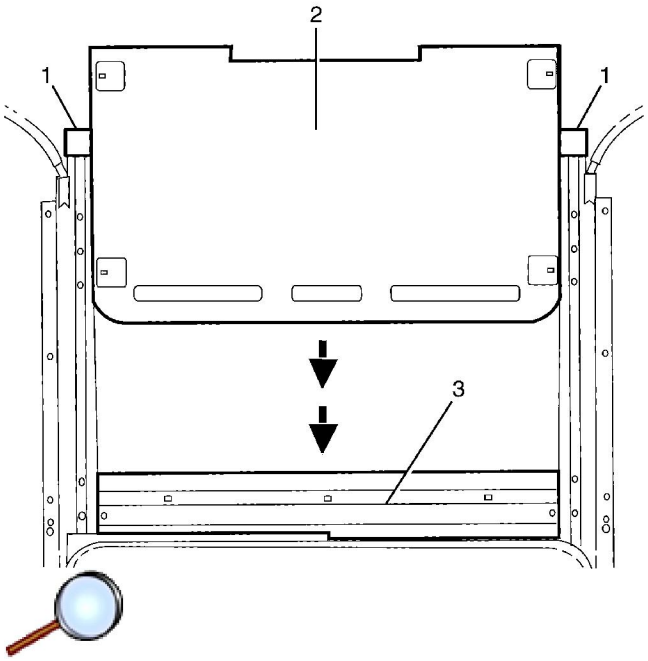
© 2010 General Motors Corporation. All rights reserved.

6. Remove the end caps (1) from the sunroof rail.
7. Carefully remove the sunshade panel (2) by sliding the sunshade panel towards the rear of the sunroof.

Note: Do not apply excessive pressure when arching the sunshade panel, failure to comply may result in damage to the sunshade panel.

8. Remove the sunshade panel (1) from the sunroof module (3).

Installation Procedure



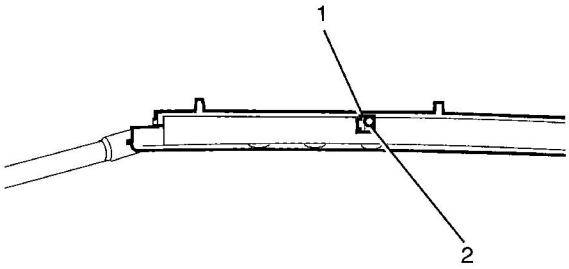
1. Position front edge of the sunshade panel (2) to the track.

Note: Do not apply excessive pressure to the sunshade panel, failure to comply may result in damage to the sunshade panel.

2. Carefully install the sunshade panel (2) by sliding the sunshade panel toward to the front of the sunroof module (3).

Caution: Refer to Fastener Caution in the Preface section.

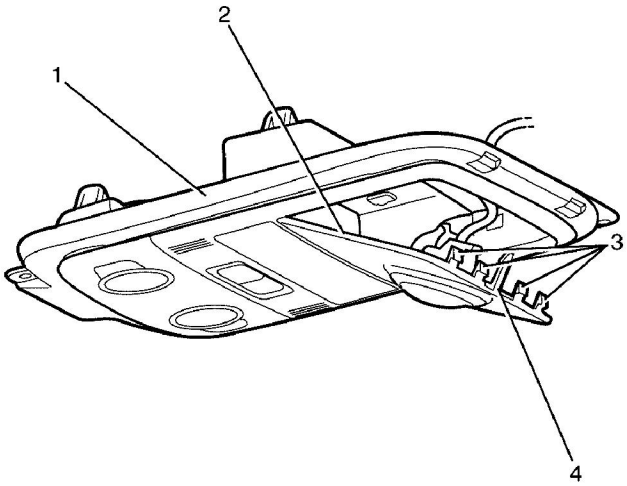
3. Install the sunroof end caps (1) to the sunroof rail and tighten to **1 N·m (9 lb in)**.
4. Slide the sunshade panel forward and rearward to make sure free operation is present.



5. Install the sunshade stop rubber (1) to the sunroof module. Repeat for the opposite side.
6. Install the sunshade stop rubber to sunroof module retaining screw (2) and tighten to **1 N·m (9 lb in)**. Repeat for the opposite side.
7. Install the sunroof module. Refer to Sunroof Module Assembly Replacement.
8. Install the headliner. Refer to Headlining Trim Panel Replacement.

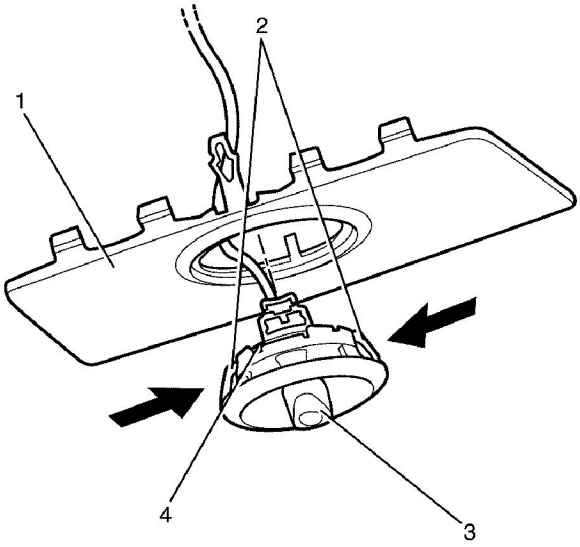
Sunroof Switch Replacement

Removal Procedure



Important: The headliner can be easily damaged or discoloured. Use care when working in the area of the headliner.

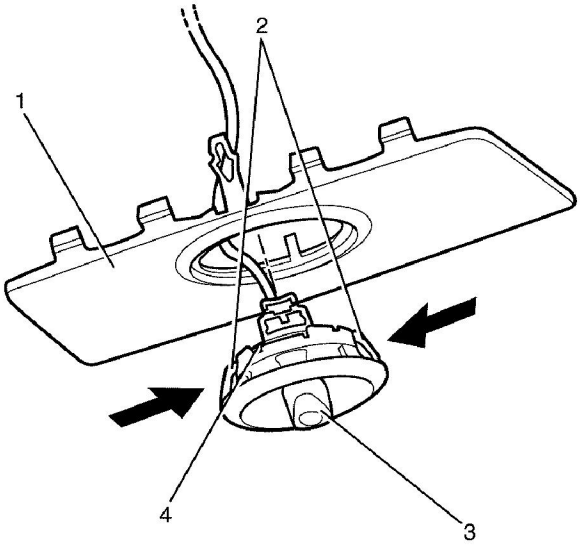
1. Insert a suitable tool into slot (4) and pry the sunroof switch assembly (2) down. Disengage the retainers (3 and 4) from the sunroof switch assembly (2). Pivot the sunroof switch assembly (2) down to remove the sunroof switch assembly (2) from the dome lamp assembly (1).



© 2010 General Motors Corporation. All rights reserved.

2. Disengage the retaining clips (2) and remove the sunroof switch (3) from the sunroof switch surround trim (1).
3. Disconnect the sunroof switch connector (3) from the sunroof switch (4).

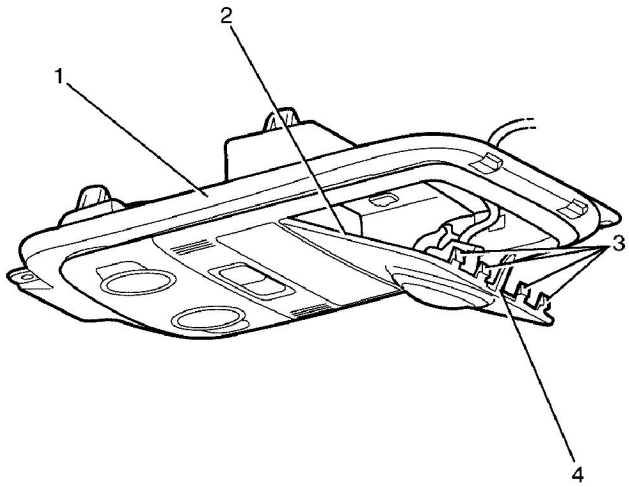
Installation Procedure



1. Route the sunroof switch connector (4) through the back of the sunroof switch surround trim (1) and connect the sunroof switch connector (4) to the sunroof switch (3).

   Important: Listen for an audible click to confirm correct fitment.

2. Install the sunroof switch (3) to the sunroof switch surround trim (1).



Important: Listen for an audible click to confirm correct fitment of the retainers (3 and 4).

3. Insert the front edge of the sunroof switch assembly (2) to the dome lamp assembly (1) and carefully pivot the sunroof switch assembly (2) into the dome lamp assembly (1).

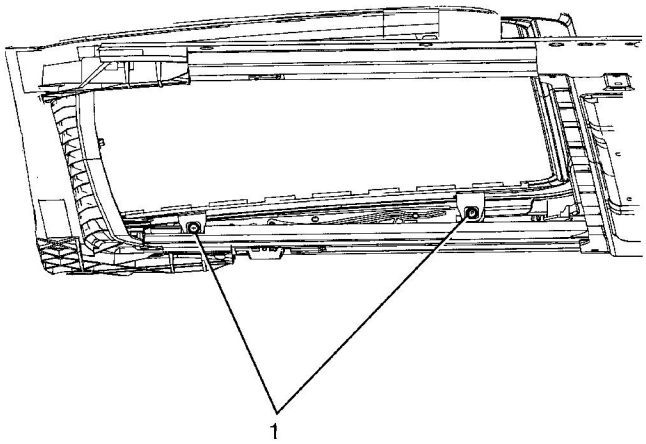
Sunroof Window Replacement

Removal Procedure

Caution: In order to prevent damage to the paint, mask the roof panel in front of the sunroof opening using masking tape and paper.

Note: In order to prevent damage to the paint, mask the roof panel in front of the sunroof opening using masking tape and paper.

1. Cycle the sunroof window to the vent position.
2. Slide the sunshade rearward.
3. Remove the sunroof panel side opening covers. Refer to Sunroof Panel Side Opening Closeout Cover Replacement.



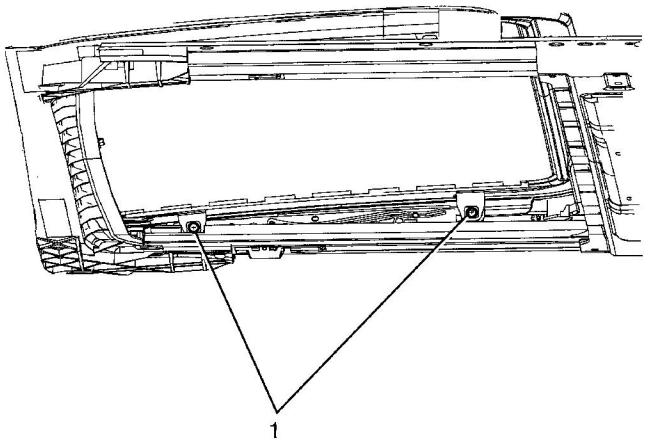
4. Remove the sunroof window to sunroof module retaining screws (1). Repeat for the opposite side.

Note: Be careful not to scratch the roof surface or the sunroof window.

5. Lift the sunroof window (3) from the sunroof module.

Installation Procedure

© 2010 General Motors Corporation. All rights reserved.



1. Position the sunroof window (3) into the opening, with the window trade mark pointing rearward.

   Note: Do not fully tighten the sunroof window to sunroof module retaining screws (1) at this stage.

2. Install the sunroof window to sunroof module retaining screws (1).

   Do not fully tighten at this stage.

3. Carefully close the sunroof window from the vent position to the fully closed position.
4. Adjust the sunroof window. Refer to Sunroof Window Height and Opening Fit Adjustment.
5. Install the sunroof panel side opening covers. Refer to Sunroof Panel Side Opening Closeout Cover Replacement.
6. Close the sunshade.
7. Cycle the sunroof window to make sure proper operation and fit.